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(54) Title: *IN VITRO IMMUNIZATION*

(57) Abstract: The present invention relates generally to a method of generating lymphocytes specific for particular antigens. More particularly, the present invention provides a method for generating antigen-reactive T-cells and even more particularly cytotoxic (CD8+) T-cells *in vitro* specific for antigens such as peptide antigens. The method of the present invention enables *in vitro* T-cell priming for particular antigens such as antigens on cancer cells, pathogenic cells, viruses or cells infected with viruses. The present invention is useful in identifying particularly immunogenic antigens for immunotherapy. The present invention further provides a method for the treatment or prophylaxis of a disease or condition in a subject by generating T-cells reactive to an antigenic molecule and administering an effective amount of antigen-reactive T-cells to the subject or other compatible host. The present invention permits the generation of dendritic cell/T-cell populations for use in cellular immunotherapy.